

Drumheller Resiliency and Flood Mitigation Office

North Drumheller (Michichi Creek & Grove Plaza)

Community Information Session

March 10, 2022



Agenda

Welcome everyone, I'm Kathryn Kolaczek the Communications Lead and event host. Today's agenda is as follows:

- Land Acknowledgement
- Introduction of the team
- Introduction of the presenters
- Presentation
- Question and answer period

Please be Considerate

- Please respect your fellow neighbours and today's speakers. Abuse will NOT be tolerated. Any disrespectful behaviour will result in being removed from the meeting.
- The focus of today's meeting is North Drumheller (Michichi Creek & Grove Plaza). Out of respect for the residents attending today to hear about North Drumheller, we will not be covering questions or content on other projects. Stay tuned to our website for information on future community information sessions specific to other projects.
- The chat function has been disabled as all questions will be managed through the Q&A tool after the presentation.

Land Acknowledgement

The Town of Drumheller respectfully acknowledges that we are on Treaty 7 territory, the ancestral and traditional territory of the Blackfoot Confederacy: Kainai, Piikani, and Siksika, as well as the Tsuut'ina First Nation, the Stoney Nakoda First Nation and Metis Nation Region 3. We recognize the land as an act of reconciliation and gratitude to those on whose territory we reside.

Today's Panelists

Deighen Blakely, P. Eng, Project Director

Dirk Scharbatke, P.Eng., PMP, Kerr Wood Leidal (KWL)

Mike Gallant, MScE, P.Eng., CPESC, Kerr Wood Leidal (KWL)

Paul Lawson, Land Agent, Scott Land & Lease Ltd.

Darryl Drohomerski, CAO, Town of Drumheller

Kathryn Kolaczek, Communications Lead, Alchemy Communications

Today's Team

In attendance at this evening's session is Mayor Colberg & Council

Mayor Heather Colberg

Councillor Patrick Kolafa

Councillor Lisa Hansen-Zacharuk

Councillor Stephanie Price

Councillor Tony Lacher

Councillor Tom Zariski

Today's Team

In attendance at this evening's session is the Community Advisory Committee

Cate Samuels

Tony Miglecz

Harvey Saltys

Wayne Powell

Keith Hodgson

Irv Gerling

Today's Presenters

Deighen Blakely, P. Eng, Project Director

Dirk Scharbatke, P.Eng., PMP, Kerr Wood Leidal (KWL)

Deighen Blakely, P. Eng, Project Director

Spring 2022 Flood Program Work

- Spring Tree Clearing
- Clay borrow material sourcing and preparation
- Regulatory Approvals

Spring Tree Clearing

- Tree clearing for three of our projects will be completed in March & April (Centennial Park, Midland, and Newcastle)
- This work is best done ahead of the migratory bird nesting season
- Elm trees need to be removed prior to March 31, to mitigate the spread of Dutch Elm Disease
- This will allow construction work to commence on schedule through the spring and summer

Spring Tree Clearing Cont'd

- Biologists will be doing sweeps for owls' nests, animal dens, and other sensitive wildlife before tree removal, as the protection of the environment is of high importance to the DRFMO
- Trees in good or fair health will be replaced at a 5:1 ratio
- A group of residents have initiated a tree repurposing project – tree carvings, benches, artwork, handrails, and natural playground to honor the life and legacy of the trees
- For more information on the tree removal & repurposing see floodreadiness.drumheller.ca

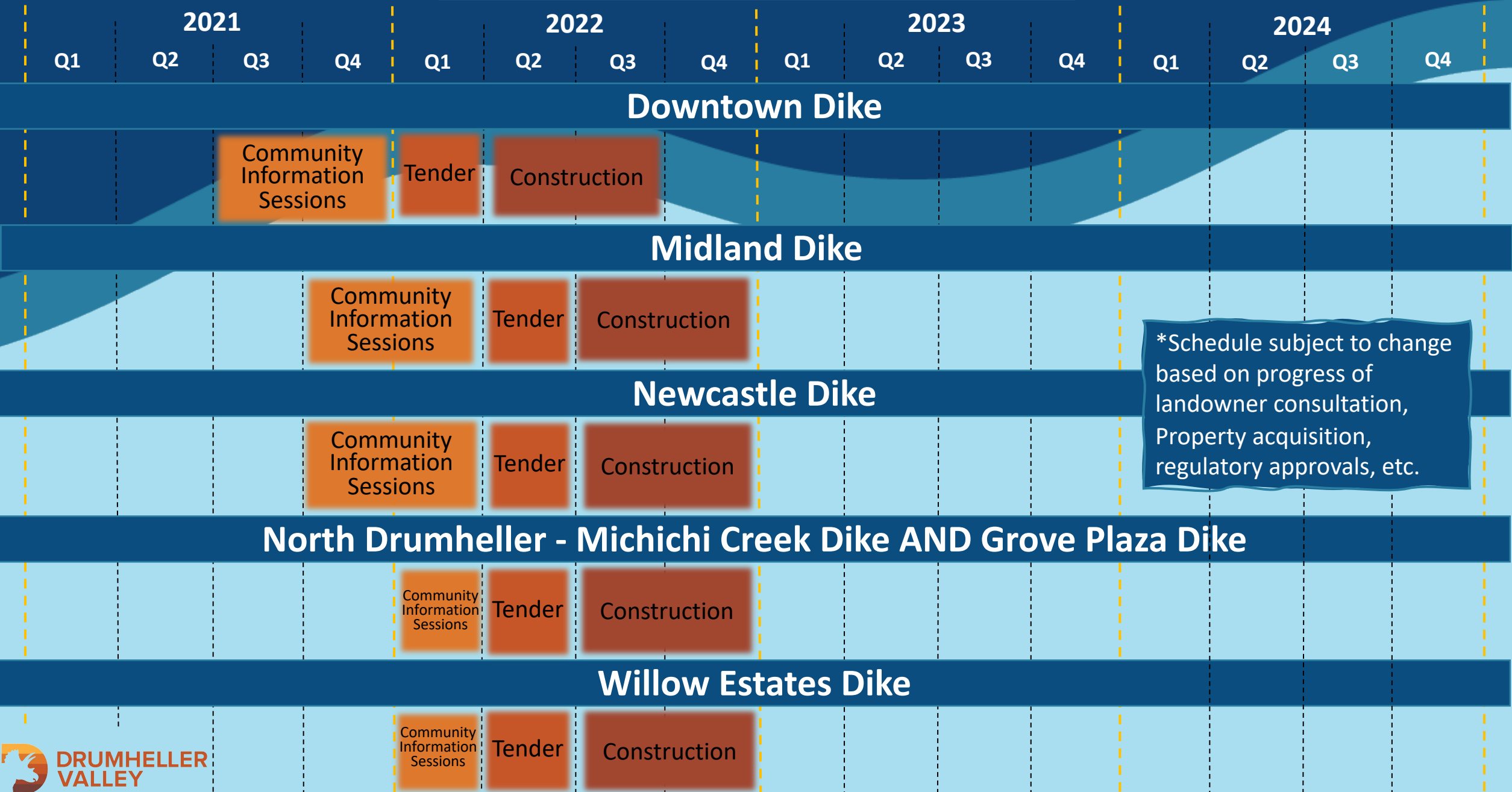
Clay Borrow Material

- Overall program needs ~ 340,000m³ of clay fill material (~340,000 cubic meters would fill the Aquaplex pool 450 times)
- An Expression of Interest was issued via the Town website in early February to seek local sources of clay material, our geotechnical engineer will be following up with interested parties
- The Flood Office is also looking to use clay material from the Speedway/Motocross Site – geotechnical investigations on-going

Regulatory Approvals

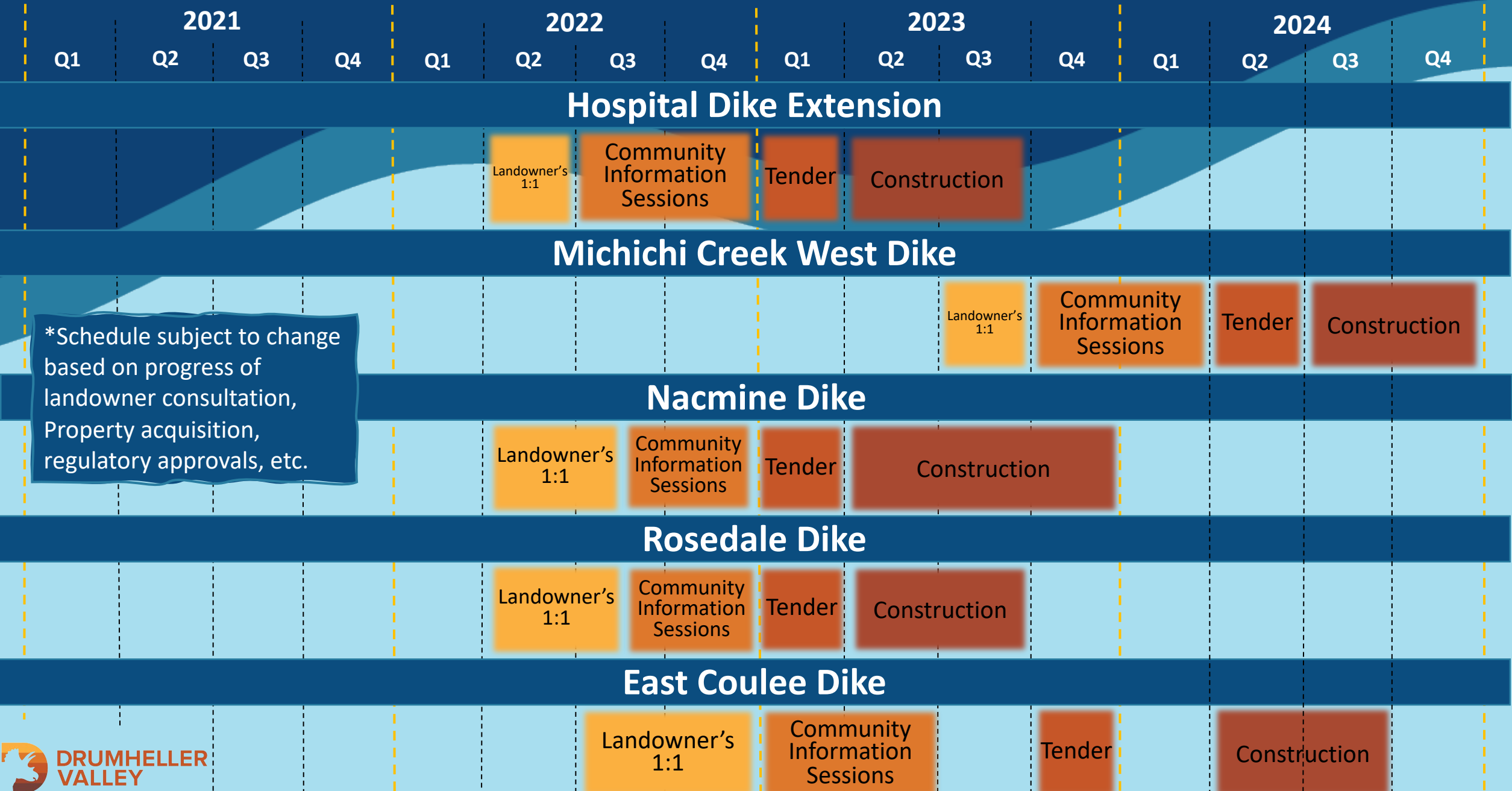
- An Environmental Management firm has been engaged to support regulatory approvals and construction oversight in the coming months
- Consultation with Federal Regulators – Fisheries and Oceans Canada and Transport Canada is on-going for in-stream work planned
- Alberta Environment and Parks – Water Act submissions
- Indigenous Consultations for in-stream construction – planning work on-going

DRFM – Preliminary Program Schedule*



*Schedule subject to change based on progress of landowner consultation, Property acquisition, regulatory approvals, etc.

DRFM – Preliminary Program Schedule*



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DRFM – Preliminary Program Schedule*

2021

2022

2023

2024

Q1

Q2

Q3

Q4

Q1

Q2

Q3

Q4

Q1

Q2

Q3

Q4

Q1

Q2

Q3

Q4

West Rosedale Scarlett Dike¹

Landowner's 1:1

Community Information Sessions

Tender

Construction

North Cambria Dike¹

Landowner's 1:1

Community Information Sessions

Tender

Construction

Rosedale Highway 10x Dike¹

Landowner's 1:1

Community Information Sessions

Tender

Construction

Lehigh

Landowner's 1:1

Community Information Sessions

Buyouts

Reclamation

Riverwood Close Dike¹

Landowner's 1:1

Community Information Sessions

Tender

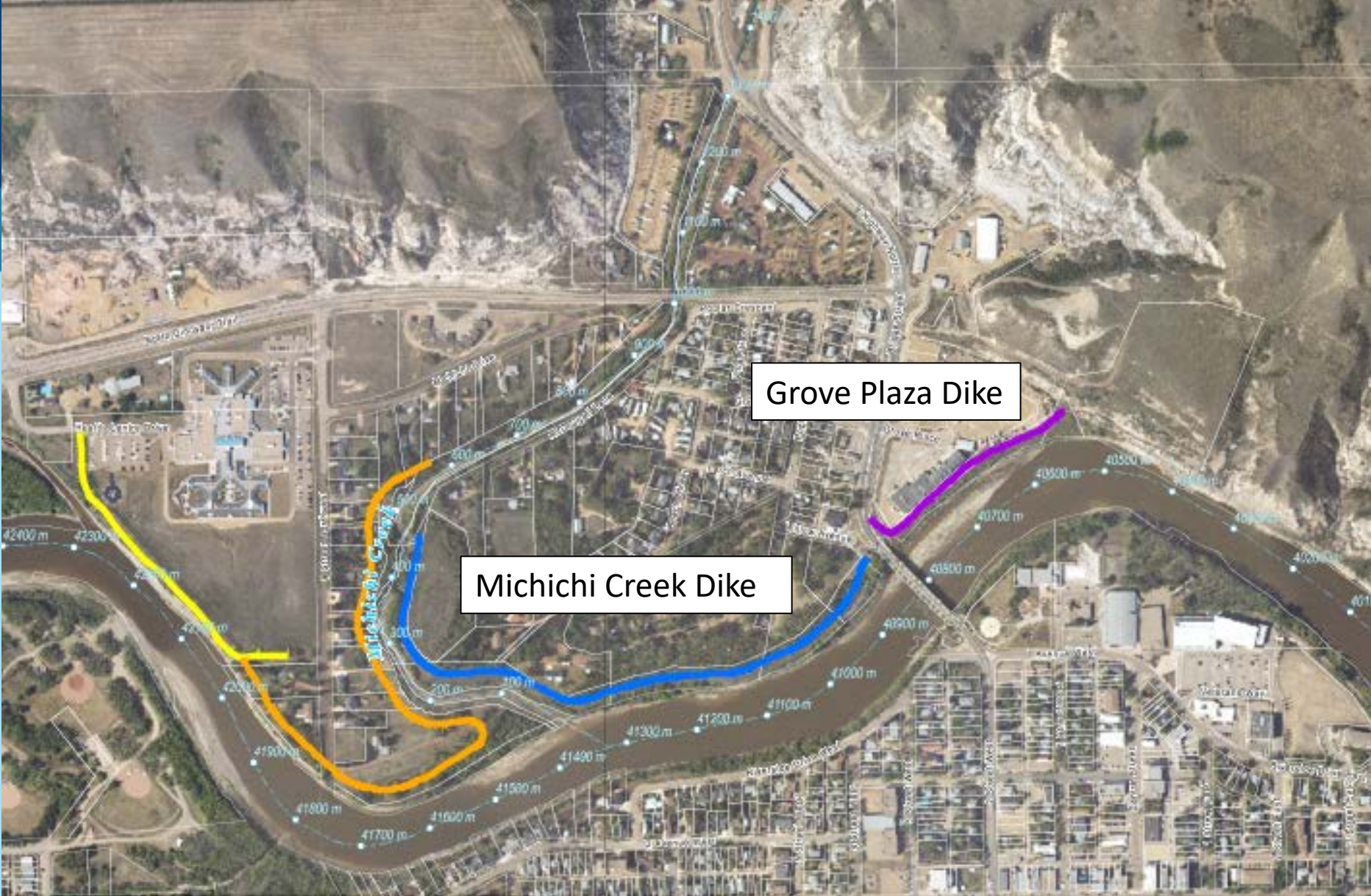
Construction

*Schedule subject to change based on progress of landowner consultation, Property acquisition, regulatory approvals, etc.

¹Project not currently funded

Dirk Scharbatke, P.Eng., PMP, Kerr Wood Leidal (KWL)

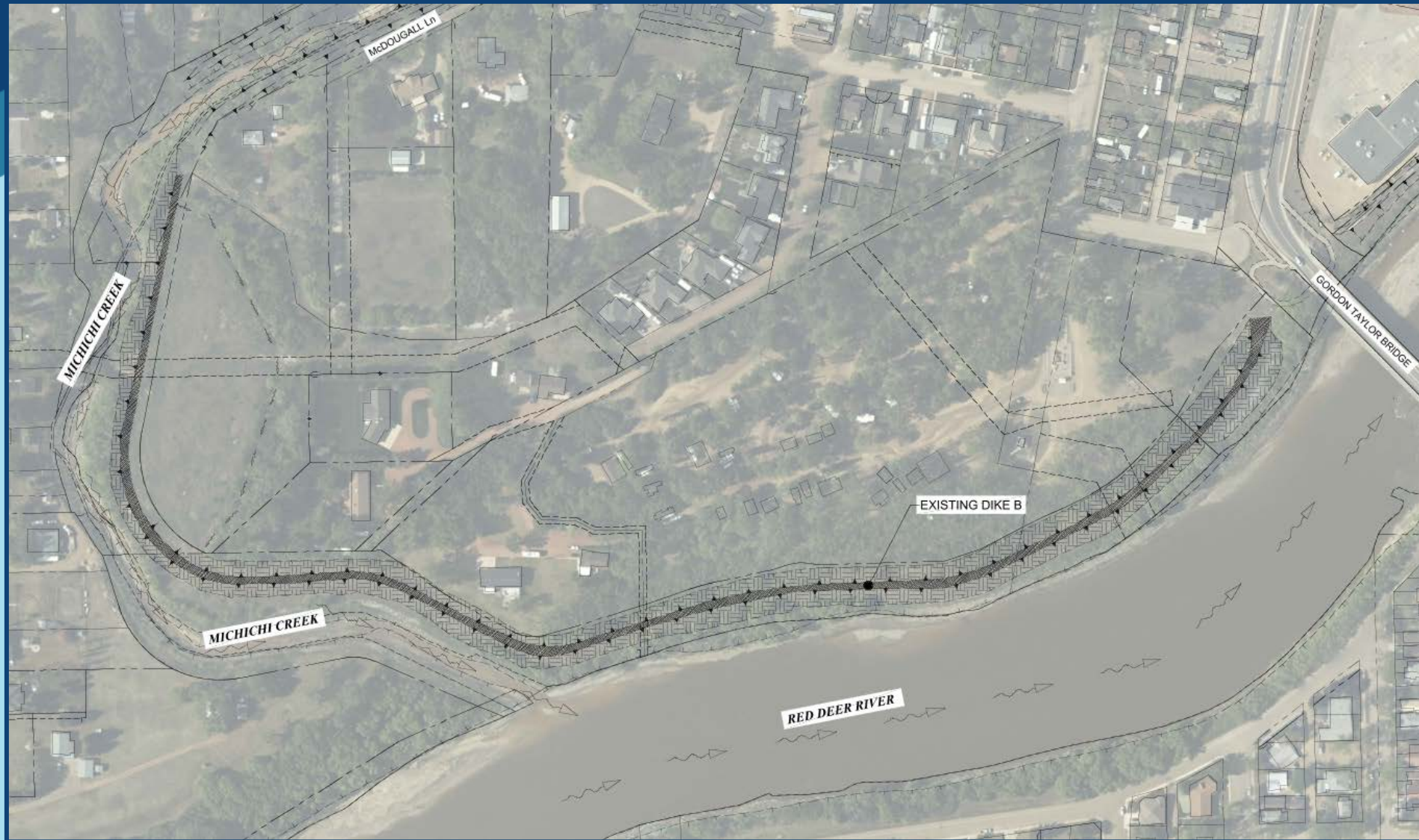
North Drumheller Area Map



North Drumheller Flood Map (1850 m³/s flood in Red Deer River)



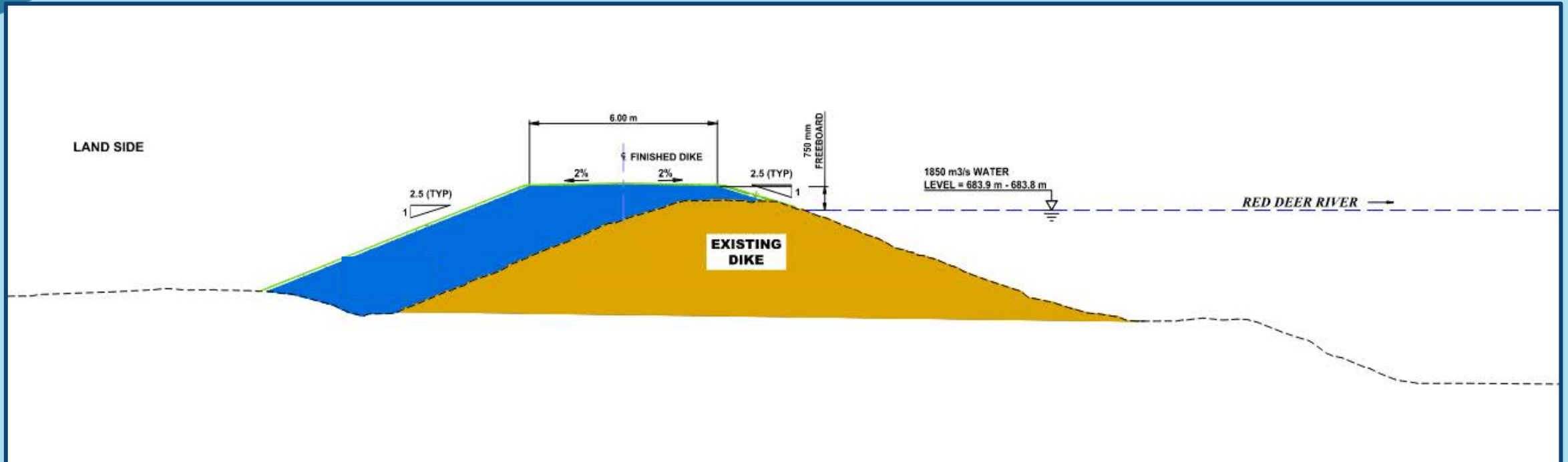
North Drumheller - Michichi Creek Dike Existing Alignment



North Drumheller - Michichi Creek Dike Flood Mitigation Upgrades



North Drumheller - Michichi Creek Dike Typical Cross-Section



North Drumheller - Michichi Creek Dike Maintenance Access and Landscaping

Gravel surface for operation & maintenance – no new public pathway



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Gravel surface for operation & maintenance – no new public pathway



North Drumheller - Michichi Creek Dike

ISO View

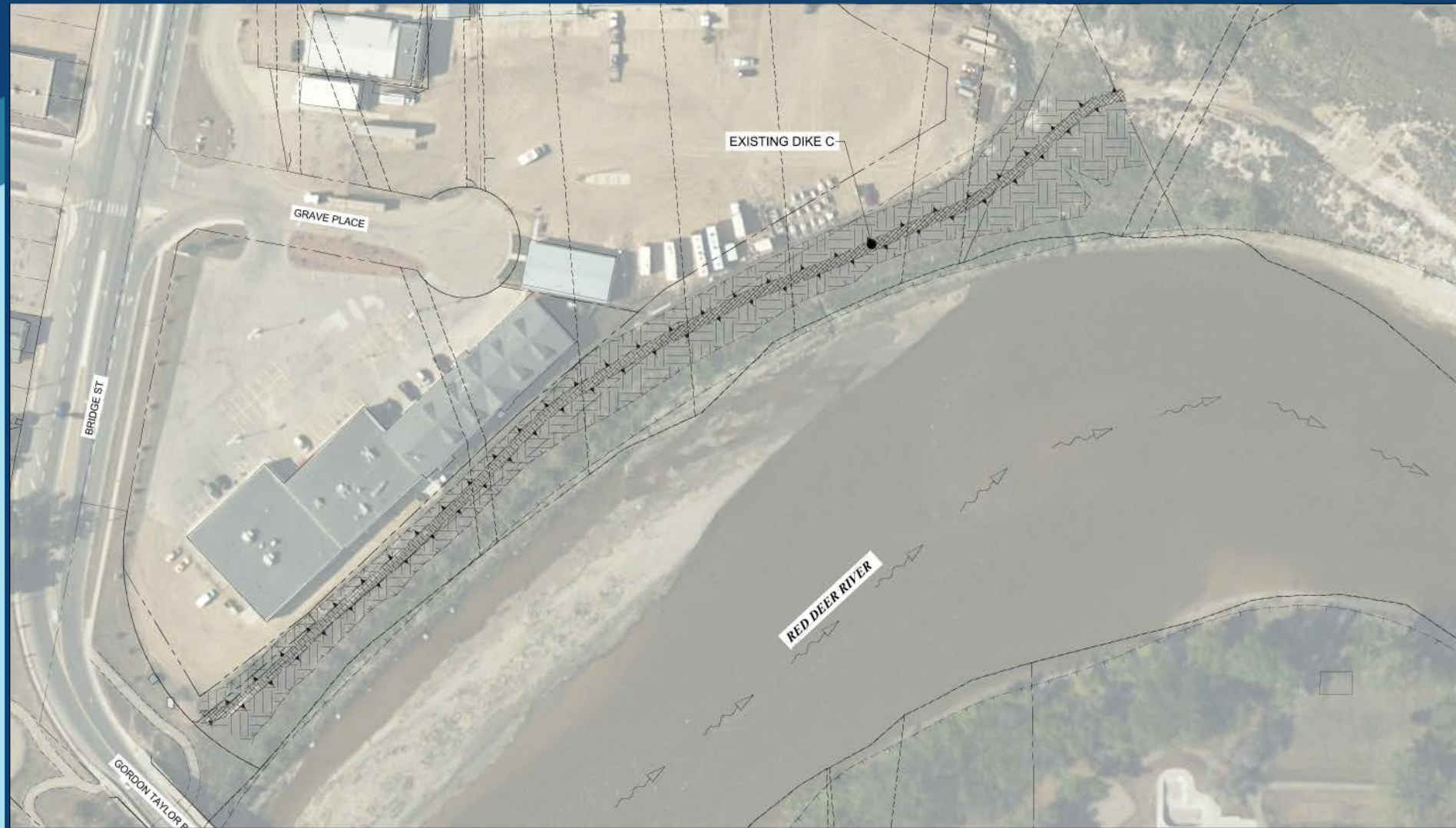


North Drumheller - Michichi Creek Dike Evaluated Alignments Before Starting the Design

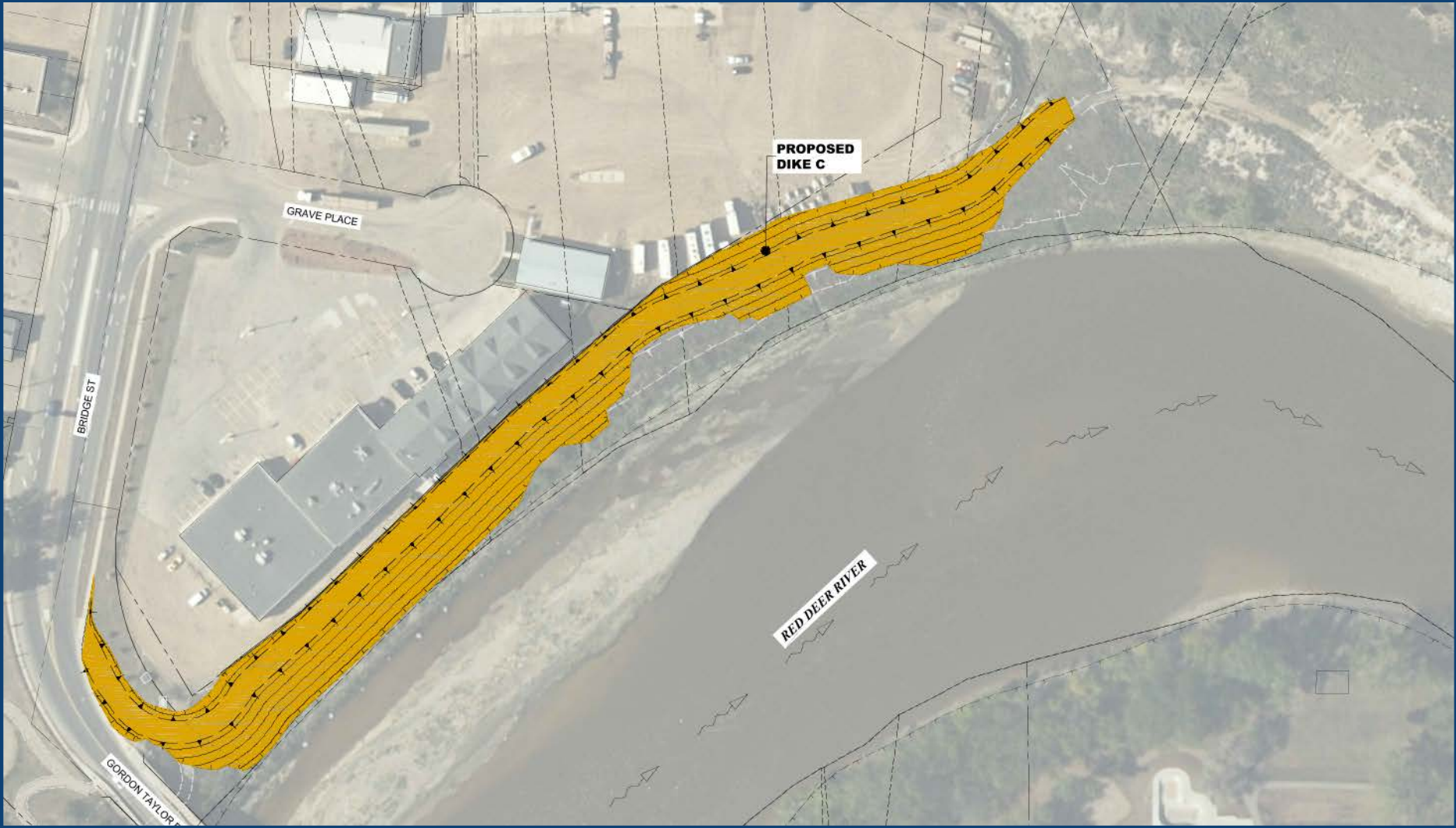
A detailed assessment was performed for the Michichi Creek Dike upgrades. The assessment included the following berm alignments:

- Match water side toe of existing dike to 5m setback from top of bank
- Maintain existing centerline
- Match landside toe with landside property lines, build dike up towards the river

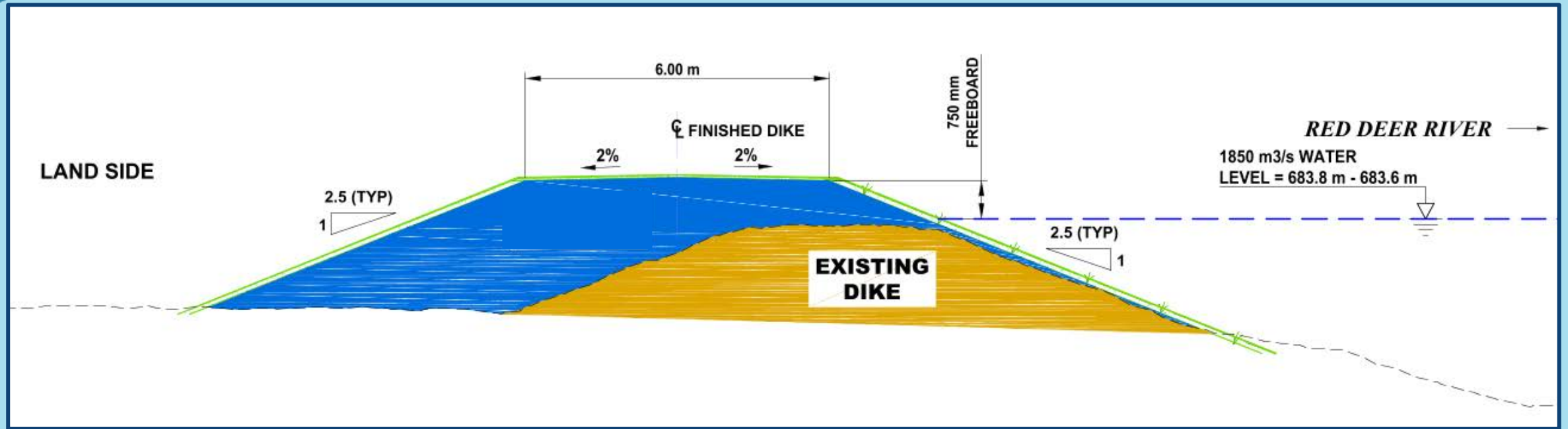
North Drumheller – Grove Plaza Dike Existing Alignment



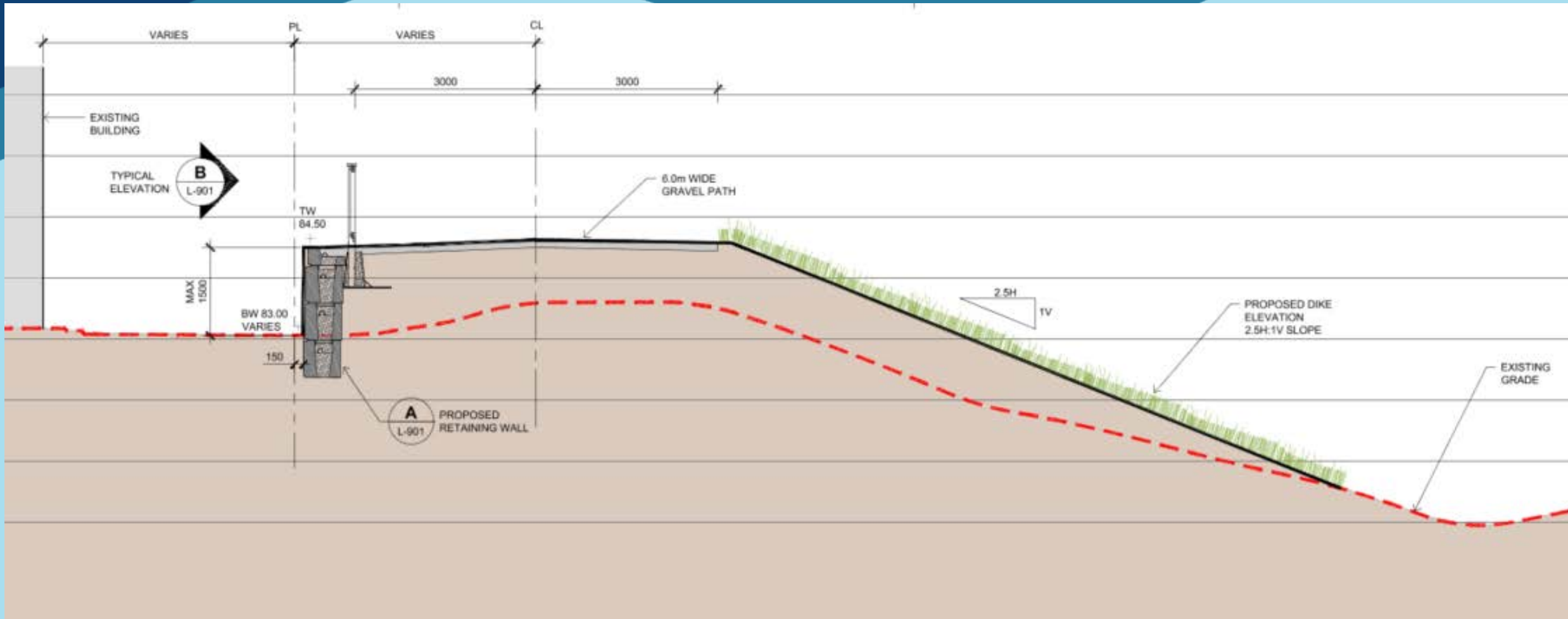
North Drumheller – Grove Plaza Dike Flood Mitigation Upgrades



North Drumheller – Grove Plaza Dike Typical Cross-Section



North Drumheller – Grove Plaza Dike Typical Cross-Section Behind Existing Buildings



North Drumheller – Grove Plaza Dike Maintenance Access and Landscaping



North Drumheller – Grove Plaza Dike ISO View



North Drumheller – Grove Plaza Dike Evaluated Alignments Before Starting the Design

A detailed assessment was performed for the Grove Plaza Dike upgrades. The assessment included the following berm alignments:

- Maintain existing centerline
- Match the riverside property line
- Match the landside property line

North Drumheller Flood Map after construction of these 2 Dikes (1850 m³/s flood in Red Deer River)



North Drumheller - Michichi Creek Dike and Grove Plaza Dike Activities & Timeline to Date

- Contract awarded for Engineering services – Mid-February 2021
- Engineering design – February 2021 – December 2021
- Tree count – January 2022
- Information to construction-affected residents – January/February 2022

North Drumheller - Michichi Creek Dike and Grove Plaza Dike Upcoming Activities & Timeline

- Tree Health Assessment – May 2022
- Historic Resources Impact Assessment (HRIA) – May 2022
- Bird Nest and Wildlife Surveys – August 2022
- Removal of Trees that interfere with Construction – August 2022
- Construction – September to December 2022

Upcoming Community Information Sessions

Upcoming virtual community information sessions:

- March 16 – Downtown Dike, Traffic Impact Assessment and Downtown Revitalization Plan
- March 31 – Willow Estates Dike

Late 2022 and early 2023 Community Information Sessions:

- Late Summer 2022 – Hospital Dike
- Fall 2022 – Nacmine Dike and Rosedale Dike
- Early 2023 – East Coulee Dike

[floodreadiness.drumheller.ca](https://www.floodreadiness.drumheller.ca)

floodreadiness@drumheller.ca

floodcommittee@drumheller.ca



Subscribe to the Flood Mitigation Emailing List!

The Drumheller Resiliency and Flood Mitigation Office sends email updates on the Flood Mitigation Project to our subscriber list. To stay informed, go to floodreadiness.drumheller.ca, scroll to the bottom of the page, and submit your name & email address.



Questions

FAQs

Questions

Q: If the Michichi Creek Dike doesn't overtop during an 1,850 m³/s elevation flood event, then why is it being built higher?

A: The purpose of the Drumheller Resiliency and Flood Mitigation Office is to protect the people and property in Drumheller from loss due to flooding. The current dike does not meet the design standards for future adaptability which includes a 6m top width and a 0.75m freeboard. As well, the portion of the dike along Michichi Creek does need to be raised as it is not high enough.

Questions

Q: Is it possible for the Michichi Creek Dike to have public access and a pathway on top?

A: No. The FMO does not have available funding for new pathways. Furthermore, this dike overlooks the campground and some adjacent landowners. The privacy of commercial and residential property is of great importance to the Flood Mitigation Office, so the only pathways undertaken will be for the dikes that already have an existing pathway.

Questions

Q: Why is the maintenance access on top of the Grove Plaza Dike made out of gravel instead of grass?

A: The gravel is required for accessing the dike safely during upgrades, repairs, and maintenance. Gravel also provides stability needed to support the weight of heavy equipment vehicles.

Questions

Q: Why do we need a retaining wall for the Grove Plaza Dike?

A: The retaining wall for the Grove Plaza Dike allows for vehicle access (including emergency vehicles) to the back entrance of the mall and the ATCO utility box.

Questions

Q: Will the fishing hole at the end of the Grove Plaza Dike still allow for public access?

A: Yes, the Grove Plaza Dike will continue to allow for public access, including the fishing hole.

Questions

Q: Will Alberta Transportation be raising their dikes as well?

A: The Town of Drumheller has shared the proposed flood mitigation plans with Alberta Transportation. Further discussions with Alberta Transportation will be held to determine what, if any, changes need to be made to their timber wall and dike to accommodate the flood plans. We expect they will raise their dikes and need to have our dikes built to the standard design levels to be ready.

Questions

Q: What changes are being made, if any, to the Gordon Taylor Bridge?

A: Alberta Transportation is responsible for the Gordon Taylor Bridge. The Town of Drumheller has shared the proposed flood mitigation plans with Alberta Transportation and it is up to them to determine what, if any, changes need to be made to the bridge to accommodate the flood plans.

Questions

Q: Where can I find the updated Land Acquisition Policy?

A: The updated Land Acquisition Policy can be found on the flood readiness website at: <https://floodreadiness.drumheller.ca/be-informed/resources/land-assembly-documents>.

Questions

Q: What is different about the updated Land Acquisition Policy compared to the last version?

A: The revised Policy combines the previous Policy (DRFM 02-20) and Purchasing Procedure document into a single document for clarity and transparency. The new Policy also removes reference to the Drumheller Land Corporation and Chief Resiliency and Flood Mitigation Officer to reflect new project management structure. The document also updates some definitions and titles.

Questions

Q: Will Alberta Transportation follow the same flood design requirements as the Flood Mitigation Office for their dikes?

A: The design flood standard set by the Province of Alberta for the Town of Drumheller is 1,850m³/s. The Town of Drumheller has shared the proposed flood mitigation plans with Alberta Transportation, including the design standards for the Towns' new infrastructure. Further discussions with Alberta Transportation will be held to determine what, if any, changes need to be made to the timber wall and berm to accommodate the flood plans.

Questions

Q: What will realigning Michichi Creek to accommodate a new dike look like?

A: Michichi Creek will be moved a bit towards the east with a constant gradient for the stretch of the re-alignment.

Questions

Q: How do the Land Use Bylaws impact development near the rivers?

A: The Land Use Bylaws utilize a flood hazard overlay to identify lands that are susceptible to flooding during high water events. The flood hazard overlay was created using a design flood flow rate of 1850 m³/s along the Red Deer River. Lands within the flood hazard overlay are labelled as protected zones or conveyance zones.

Protected zones are areas that are located behind berms that have been constructed to the 1850 m³/s design flood elevation. There are currently no areas in Drumheller that are protected from the design flood. Areas labelled “under review” are located behind proposed dikes.

These areas will not become protected until the dikes have been constructed. The Land Use Bylaw for protected zones is currently in development. Areas under review follow the general regulations of lands within the flood hazard overlay map. These regulations require the first floor of buildings and all mechanical and electrical equipment to be located above the flood construction level (water elevation of 1850 m³/s flow rate).

Questions

To ensure the community remains informed on the Flood Mitigation Project, the FAQ page of the flood readiness website is continually updated with questions received from the community.

Please visit floodreadiness.drumheller.ca/be-informed/faq to stay up to date.